

CLAIMS**I Claim:**

- 1 1. A system for determining a connection pattern of data ports which
2 are interconnected by multiconductor cables, said data ports each having a
3 socket, and said multiconductor cables each having a jack at each end of
4 the cable which mates with said socket, said system comprising:
 - 5 a socket contact positioned adjacent to said socket,
 - 6 an external contact provided for each of the jacks, said external
7 contact making electrical connection with said socket contact when the jack
8 is mated with said socket, wherein a conductor connects the external
9 contacts at the two ends of the multiconductor cable;
 - 10 at least one output signal transducer electrically coupled to at least
11 one socket contact, said output driver being operative to send a signal to
12 said socket contact;
 - 13 at least one input signal transducer electrically coupled to at least
14 one socket contact for receiving said signal sent by said output signal
15 transducer;
 - 16 a micro-processor coupled to said output signal transducer and said
17 input signal transducer for controlling said signal sent by said output signal
18 transducer and for detecting signals received by said input signal
19 transducer, said micro-processor interpreting said signals to determine the
20 connection pattern of said data ports; and

21 an output indicator coupled to said micro-processor for indicating
22 the connection pattern of said data ports as determined by said micro-
23 processor.

1 2. The system as recited in claim 1 wherein said micro-controller
2 determines the connection pattern of said data ports by a process of
3 sending a signal to a socket contact and determining which of the input
4 signal transducers have received the signal, and repeating the process for
5 every socket contact.

1 3. The system as recited in claim 1 wherein said multiconductor cable
2 is a standardized cable.

1 4. The system as recited in claim 3 wherein said multiconductor cable
2 is an RJ45 cable.

1 5. The system as recited in claim 3 wherein said multiconductor cable
2 is an RJ11 cable.

1 6. A system for determining a connection pattern of data ports which
2 are interconnected by standardized multiconductor cables, said data ports
3 each having a standardized socket, and said multiconductor cables each
4 having a standardized jack at each end of the cable which mates with said
5 socket, said system comprising:

6 a socket contact positioned adjacent to said standardized socket,
7 an external contact provided for each of the standardized jacks, said
8 external contact making electrical connection with said socket contact
9 when the jack is mated with said socket, wherein a conductor connects the
10 external contacts at the two ends of the standardized multiconductor cable;

11 an output signal transducer uniquely coupled to each of said socket
12 contacts, said output driver being operative to send a signal to said socket
13 contacts;

14 an input signal transducer uniquely coupled to at least each of said
15 socket contacts for receiving said signal sent by said output signal
16 transducer;

17 a micro-processor coupled to said output signal transducer and said
18 input signal transducer for controlling said signal sent by said output signal
19 transducer and for detecting signals received by said input signal
20 transducer, said micro-processor interpreting said signals to determine the
21 connection pattern of said data ports; and

22 an output indicator coupled to said micro-processor for indicating
23 the connection pattern of said data ports as determined by said micro-
24 processor.

1 7. The system as recited in claim 6 wherein said micro-controller
2 determines the connection pattern of said data ports by a process of
3 sending a signal to a socket contact and determining which of the input
4 signal transducers have received the signal, and repeating said process
5 for every socket contact.